ORRIN G. HATCH

JACE JOHNSON CHIEF OF STAFF

104 Hart Senate Office Building

TELEPHONE: (202) 224-5251 TDD (202) 224-2849 FAX: (202) 224-6331

Website: http://www.senate.gov/-hatch

United States Senate

WASHINGTON, DC 20510-4402

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August 26, 2009

The Honorable Norman R. Augustine Chairman Review of U.S. Human Space Flight Plans Committee National Aeronautics and Space Administration 300 E Street, SW Washington, DC 20024-3210

Dear Chairman Augustine:

As you know, I am a long-time supporter of manned-space flight and its supporting industrial infrastructure. Sending astronauts to the moon and exploring space will always be heralded as one of our nation's most extraordinary accomplishments. Accordingly, I fully support the Commission's mandate of conducting an independent review of our manned space program to ensure our plans are "safe, innovative, affordable and sustainable." Therefore, I would like to take this opportunity to share some of my thoughts on how to achieve these noble goals.

The foundation of any manned space exploration plan is identifying the safest and most efficient means to reach space. In 2005, the National Aeronautics and Space Administration ("NASA") conducted a series of studies that determined a Shuttle-Derived System, which evolved in the present Ares I system, provided the most reliable and affordable solution to maintain our nation's manned space flight capability.

I am aware of the recent analysis which claimed selecting a version of the Delta IV rocket would result in cost savings. However, NASA's previous reports, which were supported by independent studies, noted a Shuttle-Derived System has already been designed for the safety standards required for human flight. Whereas an Evolved Expendable Launch Vehicle, which includes the Delta IV system, would require an extensive safety certification process. In addition, the authors of the new report concede they "did not perform estimates of loss of mission and loss of crew possibilities." It is my understanding previous NASA reports had found the Ares I system to be twice as safe as the Delta IV proposal.

In addition, the latest report stated if the Ares I system was discarded, it would cost NASA an additional \$1.1 to \$3.5 billion to develop a complementary heavy lift launch vehicle. The new report further estimated a cost of \$14.1 to \$16.6 billion to redesign the Orion Crew Exploration Vehicle to meet the specifications of the Delta IV System. As NASA's budget for manned space flight is expected to be especially limited for the foreseeable future, it

is difficult to imagine a scenario in which such added expenses are affordable. It should also be noted, the initial test of the Ares I system is scheduled to occur in the next two weeks.

On a related matter, the continuation of the Ares I program will bring greater stability to our nation's vital solid rocket motor industrial production capability. As you well know, with the imminent retirement of the Space Shuttle and completion of the modernization of the Minuteman III system imminent, it will be exceptionally difficult to maintain our solid rocket industrial base for future space and strategic deterrent programs without the production of the Ares I.

Thank you for your consideration of these matters.

Sincerely,

Orrin G. Hatch

United States Senator